



## **School of Dental Medicine – Research Day**

Course Catalog Number: ELEC 1149 220401 (Spring 2023)

### **COURSE AGENDA AND TOPICS COVERED**

The following schedule is tentative; changes/updates may occur before this course starts (presenters, campus location, dates & times, etc.), however, this is very rare. Changes/Updates/Adjustments and emergencies do happen, a presenter may find they need more time to cover a certain topic, or we may have to shift to another location, due to rooming conflicts. Any enrolled participants always receive up-to-date information/announcements through their registration contact information.

### **Friday, February 24, 2023**

### **Education 2 South L28-1102**

10:30–12:30pm	Poster Set Up and Preview
1:00 – 1:05pm	Welcome and Introduction Dr. Jeffrey Stansbury, Senior Associate Dean for Research and Professor, School of Dental Medicine
1:05 – 1:15pm	Dean’s Welcome, Dean Denise Kassebaum, School of Dental Medicine
1:15 – 2:15pm	<b>Keynote Speaker:</b> Carmem Pfeifer, DDS, PhD, Professor, Oregon Health & Science University <b><i>Host and Bacterial Enzyme-Mediated Approaches to Produce Durable Biomaterials: Trends in Polymeric Materials for Dental Applications</i></b>
2:30 – 3:30pm	Poster session with refreshments on the Student Community Bridge.
3:30 – 3:45pm	Mr. Thomas Forman, MD-PhD Candidate, G3   Medical Scientist Training Program, Department of Craniofacial Biology <b><i>Alternative RNA splicing downstream of PDGFR alpha signaling in craniofacial development</i></b>
3:45 – 4:00pm	Ms. Natalie Anderson, Doctor of Dental Surgery Candidate 2026 <b><i>Design of Robust, Non-Covalently Reinforced Composite Materials</i></b>
4:00 – 4:15pm	Ms. Elise Ambrose, Doctor of Dental Surgery Candidate 2024 <b><i>Light-Propelled Dental Adhesives with Enhanced Bonding Capability</i></b>
4:15 – 4:30pm	Dr. Stanley (Michi) Kanai, Postdoctoral Fellow, Department of Craniofacial Biology <b><i>Lower Jaw Development is Mediated Solely by the q/11 Class of G Proteins</i></b>
4:30 – 5:00pm	Award announcements and closing remarks.

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Poster Presentations include competitions in four categories, for \$150 prizes for presenters the CU School of Dental Medicine, recognizing excellence in the various categories of research: a) Dental Students and ISP Students, b) Graduate Students, c) Laboratory Staff Professionals and d) Post Docs and Residents. Everyone with a research project at the School of Dental Medicine were encouraged to participate.

### **WHAT IS THIS COURSE ALL ABOUT?**

Join us at CU School of Dental Medicine's 38<sup>th</sup> Annual Research Day on Friday, February 24, 2023. Highlighting clinical and translational research, this year's Research Day features faculty and student speakers, as well as poster exhibits. Learn more about the exciting research, taking place at our school, and how it influences the future!

### **CLASS LOGISTICS AND LOCATION**

This class is a Half Day, Friday, February 24, 2023, from 1:00 pm to 5:00 pm with snacks (provided). Course held at the University of Colorado Anschutz Medical Campus in Aurora, Colorado (13121 East 17<sup>th</sup> Avenue, Aurora, Colorado 80045).



**Dr. Denise Kassebaum, DDS, MS**, is Dean of the University of Colorado School of Dental Medicine and Professor of Diagnostic and Biological Sciences. She earned her Doctor of Dental Surgery degree from the University of Missouri-Kansas City School of Dentistry, and her Masters of Science in Oral Medicine and Oral Radiology from the University of Texas Health Sciences Center at San Antonio Graduate School of Biomedical Sciences. She is a Diplomate of the American Board of Oral Medicine and a fellow of the American College of Dentists, the International College of Dentists, and the Pierre Fauchard Academy. Dr. Kassebaum completed the Executive Leadership in Academic Medicine (ELAM) fellowship and was a member of the inaugural class of the ADEA Leadership Institute. At the University of Colorado, she is the project director of the Frontier Center Project dedicated to inter-professional education, and the Heroes Clinic Project that provides innovative dental care pathways to serve veterans. Dr. Kassebaum chairs the American Dental Education Association's Commission on Change and Innovation in Dental Education, the ADEA CCI 2.0.



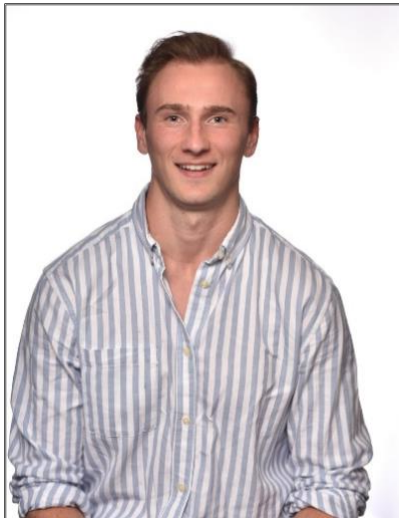
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**Dr. Carmem Pfeifer, DDS, PhD**, is Professor in the Division of Biomaterials and Biomechanics at OHSU School of Dentistry. Dr. Pfeifer teaches Dental Materials and serves as an instructor in several Restorative Dentistry pre-clinical disciplines. She has published over 100 research articles in the field of Dental Materials Sciences and Polymer Chemistry and serves as a standing member of the DSR study section for the National Institute of Dental and Craniofacial Research at NIH. She has been recently appointed Associate Editor for the Journal of Dental Research. Dr. Pfeifer's research focuses on the development of innovative polymeric materials for restorative dentistry, and she has received the inventor of the year award from OHSU for the commercial potential of her patented inventions, which have attracted the interest of several potential licensees. She has received over 12 million dollars in funding for her research and career development from the National Institutes of Dental and Craniofacial

Research (including the hyper-competitive R35 – Sustaining Outstanding Achievement in Research award), Oregon Medical Research Foundation, National Science Foundation, as well as industry partners.

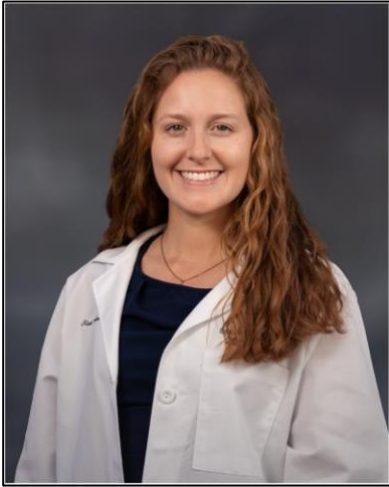


**Thomas E. Forman, MD-PhD Candidate; Department of Craniofacial Biology.** Mr. Forman attended the University of Oregon where he obtained his Bachelor of Science in 2017 with honors. While at the University of Oregon, he worked in the laboratory of Dr. Kryn Stankunas investigating the role of receptor tyrosine kinase signaling in cardiovascular development in mice. In 2018, he entered the MD-PhD program at the University of Colorado, and in 2021 joined the lab of Dr. Katherine Fantauzzo in the Department of Craniofacial Biology. In 2022, he was awarded a F31 Fellowship from the National Institute of Dental and Craniofacial Research (NIDCR). His current research as an NIDCR-funded predoctoral fellow focuses on the mechanisms by which receptor tyrosine kinases, specifically platelet-derived growth factor receptor alpha, control gene expression during mammalian craniofacial development.



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**Ms. Natalie Anderson, BS, DDS Candidate (Class of 2026).** Her research training began in May 2022 prior to starting dental school when she was awarded a position as a Summer Research Scholar. She trained in the Stansbury Biomaterials Laboratory at the University of Colorado School of Dental Medicine. Her research project was to design water tolerant non-covalently reinforced composites with Dr. Stansbury and his senior laboratory manager. The experience and knowledge she gained during this time enabled her to place 1<sup>st</sup> in the CU School of Dental Medicine Research Competition in Fall 2022. Additionally, her research abstract was recently accepted at the American Association for Dental, Oral, and Craniofacial Research Annual Meeting this March in Portland, Oregon. Ms. Anderson will present her research findings at a scientific session, and compete in the Student Competition for Advancing Dental Research and its

Application (SCADA). Ms. Anderson is passionate about education and am interested in becoming a Pediatric Dentist with a potential career in academia.



**Ms. Elise Ambrose, BS, DDS Candidate (Class of 2024),** is a third year DDS student at the University of Colorado School of Dental Medicine who seeks to find novel solutions to traditional challenges within dental materials. As part of the Nair Lab, she has worked with a team of chemical engineers and materials science researchers to test composite restorations using light-propelled adhesives. Having graduated from the Metropolitan State University in 2018 with a major in biology and a minor in chemistry, she has previously won accolades for her work on bed bug microbiomes as part of her undergraduate research work. She is also the recipient of multiple research awards at the University of Colorado School of Dental Medicine and has most recently won a 2023 student travel grant to present her at work at the American Association of Dental, Oral and Craniofacial Research meeting in Oregon. Ms. Ambrose loves

animals and works as a keeper assistant at the Denver Zoo when her schedule permits.

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**Dr. Stanley (Michi) Kanai, PhD, Department of Craniofacial Biology.** Dr. Kanai graduated from the University of California, San Diego in 2008 with a Bachelor of Science in Neuroscience and Physiology. As an undergraduate he worked as a research assistant in the laboratory of Dr. Geoff Rosenfeld, performing research on eukaryotic gene regulation. In 2010, he transitioned to Washington University in St. Louis School of Medicine and received his PhD in Molecular Cell Biology. He trained in the laboratory of Dr. Kendall Blumer, with his dissertation research on the regulatory mechanisms and pharmacology of G protein-coupled receptor signaling. Following the completion of his doctorate in 2017, Dr. Kanai began his postdoctoral training in the laboratory of Dr. David Clouthier in the Craniofacial Biology department at the University of Colorado Anschutz Medical Campus. His current studies involve mechanisms of craniofacial development and disorders. In 2020, Dr. Kanai was awarded an F32 Fellowship from the National

Institute of Dental and Craniofacial Research to investigate the role of heterotrimeric G proteins in zebrafish craniofacial development, under the guidance of co-mentors Drs. David Clouthier and James Nichols.

### **COURSE TUITION(s) AND INCLUSIONS: Start Date is Friday, February 24, 2023**

\$20.00 – Continuing Education Units Earned; FREE – NO Continuing Education Units Earned

- Four (4.0) hours of in-class, live lecture and interactive education
- Presenters' notes, presentation, contact information, and much more (we no longer physically print materials, unless they are absolutely needed for in-class use); Dropbox, loaded with class materials before class begins
- Participants who signed-up to receive Continuing Education Units (CEU/PDU/Hours) and attend the course in-full earn 4.0 Continuing Education Credit Hours; sign in on class attendance roster(s) required (certificates will be distributed to participants who complete both the class evaluation and the needs assessment forms)

### **CLASS REGISTRATION PROCESS AND DEADLINE**

The Continuing Dental Education Program does not follow the traditional schedule and/or deadlines as the School of Dental Medicine and/or the University of Colorado Anschutz Medical Campus. Please have your registration completed through RegOnline (link to class registration page listed below) no later than two days (deadline is Wednesday February 22, 2023) before the course start date.



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Participants are able to register right up to the start date; however, be aware, if you wait until the last minute the course may be full, your in-class and/or hands-on materials may not be immediately available. In short, please register early and do not procrastinate – you may miss-out!

The Registration Process through RegOnline is FREE! Do not struggle on your own; always contact the Continuing Dental Education Program if you have any questions, concerns, and/or comments. We would love to hear from you! We would like to have your registration in the RegOnline system by Wednesday February 22, 2023. **Here is the Course/RegOnline Registration Page:**

<https://www.regonline.com/registration/Checkin.aspx?EventID=2555983>

### **CLASS DROP/WITHDRAW DEADLINE**

Please understand our program must make decisions in a timely manner, order supplies, and budget accordingly.

Any participant (already registered) who chooses to drop/withdraw from this course, for any reason, must do so in writing, by emailing a drop/withdraw request/notification to Deidre Callanan or [Deidre.Callanan@cuanschutz.edu](mailto:Deidre.Callanan@cuanschutz.edu). There will be no refunds for non-attendance. If an emergency does occur before and/or during a course you registered for, which completely restricts you from attending class, there are policies and procedures for dropping/withdrawing – contact Deidre Callanan and/or the CDE Office.

### **CONCERNING THE AMERICAN DENTAL ASSOCIATION (ADA) CONTINUING EDUCATION RECOGNITION PROGRAM (CERP)**

The American Dental Association Continuing Education Recognition Program (ADA CERP) accredits the University of Colorado (CU) School of Dental Medicine (SDM). Our accreditation/provider is important to us. ADA CERP is a service of the American Dental Association to assist dental professionals in identifying quality providers of continuing dental education. ADA CERP does not approve or endorse individual courses or instructors, nor does it imply acceptance of credit hours by boards of dentistry.

To ensure balance, independence, objectivity, and scientific rigor at all programs, the planners and faculty must make full disclosure indicating whether they and/or their immediate family (includes spouse/partner) have any relationships with pharmaceutical companies, biomedical device manufacturers, and/or corporations whose products or services are related to pertinent therapeutic areas. All planners, faculty, content specialists, and feedback specialists participating in Continuing Dental Education (CDE) activities must disclose to the audience information listed above. If relevant relationships are not disclosed, we must disqualify all parties from the planning and implementation of this CDE activity.

